DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-023706

Address: 333 Burma Road **Date Inspected:** 16-May-2011

City: Oakland, CA 94607

OSM Arrival Time: 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island **Location:** Shanghai, China

CWI Name: Mr. LIU HUA JIE **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component: OBG Segment**

Summary of Items Observed:

On this date CALTRANS OSM Quality Assurance (QA) Inspector Santhosh Ramakrishna Pillai was present during the times noted above for observations relative to fabrication work of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China.

This QA inspector randomly observed the following work:

1. INPROCESS:

Orthotropic Box Girder (OBG) at Trial Assembly Area:

ZPMC welding personnel performing Shielded Metal Arc Welding of Repair weld for the deck plate I-rib stiffener built up weld for groove preparation located on 13AE at bike path side. The welder is identified as 040378. ZPMC QC Mr. WANG LI YANG was onsite monitoring the welding variables. The inprocess Shielded Metal Arc Welding appears to be progressing in compliance with WPS-345-SMAW-3G (3F)-FCM-Repair-1. The weld repair report number is named as WR 20962. Further weld detail mention in attached picture.

ZPMC welding personnel performing Shielded Metal Arc Welding of Repair weld for the deck plate I-rib stiffener built up weld for groove preparation located on 13AE at bike path side. The welder is identified as 040378. ZPMC QC Mr. WANG LI YANG was onsite monitoring the welding variables. The inprocess Shielded Metal Arc Welding appears to be progressing in compliance with WPS-345-SMAW-3G (3F)-FCM-Repair-1. The weld repair

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report number is named as WR 20962.

ZPMC welding personnel performing Shielded Metal Arc Welding of Base Metal Repair weld (temporary attachment removal area) near the bottom plate to bottom plate transverse splice weld joint located on 13AE+13BE at bike path side. The location near the weld is designated as OBE13B-003. The welder is identified as 10349. ZPMC QC Mr. WANG LI YANG was onsite monitoring the welding variables. The inprocess Shielded Metal Arc Welding appears to be progressing in compliance with WPS-345-SMAW-4G (4F)-FCM-Repair-1. The weld repair report number is named as CWR-2969. Further weld detail mention in attached picture.

ZPMC personnel heat straightening Orthotropic Box Girder (OBG) member identified as deck plate to deck plate transverse splice weld joint located on 13AE+13BE at bike path side. Distortion appeared to be caused by welding. ZPMC Quality Control (QC) inspector identified as Mr. WANG LI YANG was present to monitor the heat straightening process. The heat straightening appears to comply with Heat Straightening Report number is HSR 1 (B) 10349.

2. NDT:

Magnetic Particle Testing (MT):

MT carried out for the ZPMC submitted Notification No 09148.

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area that has been previously tested and accepted by ZPMC MT technicians. This QA Inspector generated a TL-6028 MT report on this date. The members are identified as complete penetration joint between deck plate U-rib splice plate weld joint located on 13AE. The weld designation numbers is as follows:

- 1. X3305K-099-001,
- 2. X3305K-099-002,
- 3. X3305K-100-001,
- 4. X3305K-100-002.

MT carried out for the ZPMC submitted Notification No 09146.

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area that has been previously tested and accepted by ZPMC MT technicians. This QA Inspector generated a TL-6028 MT report on this date. The members are identified as complete penetration joint between deck panel diaphragm web to flange weld joint located on 13AE at counter weight side, Panel Point (PP-117.5). The weld designation numbers is as follows:

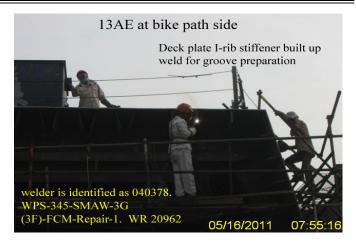
1. SEG3013R-006.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Pillai,Santosh	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer